471 ment and by the local governments; therefore, at the time the Communists assumed control of Tientsin, state-controlled industry accounted for approximately 40 per cent of the industrial output of this city.[2]

316 North China's coal mining industry was first
472 developed in Shansi Province, which is considered to have the richest coal reserves in China. Small native iron smelters were scattered throughout the province. Two private coal mining companies, Chin-pei in North Shansi and Pao-ch'ing in Central Shansi, were of greatest importance to the region's coal mining industry, but smaller companies were of only slightly lesser importance.

473 Before the Sino-Japanese war, the governor of Shansi organized a provincial enterprise called the Northwest Company as part of a program to encourage the general industrial development of the province and bolster the provincial economy. It was operated as a holding company and acquired interests in the two privately owned coal mining companies. The Northwest Company also erected two iron and steel works, one in Central Shansi (Yang-ch'üan) and the other in Taiyuan, the provincial capital, and began to operate several other light industries.

During the period of Japanese occupation, a number of new light industries were encouraged

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2. Ta-kung Pao [Ta-kung Daily] , Hong Kong, July 15, 1955.

2; Gamble S-5 (1926-1933)1954 AF 12 North China AF 12

CHAPTER XV

Industry

INDUSTRY in Ting Hsien was that of a non-mechanical, agricultural area. Power was almost entirely animal or human. The tools were mainly hand tools. The principal machines were the stone flour mill, the cotton gin, the cotton batting machine, the spinning wheel, the loom, and the Persian wheel for irrigation.

Because Ting Hsien was so predominately an agricultural area (96 per cent of its families farmed some land) only a small proportion of the industrial workers were engaged in year round industry. Most of them were farmers who turned to other occupations during the idle months on the farm. Because most of the industrial processes were relatively simple and required few tools and little capital, there was a large amount of home industry.

Industry, both home and shop,[1] engaged some 91,000 workers, about one in five of the total population and one in three of those over 14 years of age. The workers were divided approximately 24,500 males and 66,500 females. Approximately 12 per cent of all males and 34 per cent of all females were engaged in some form of industrial work. For those over 14 years of age the figures were males 18 per cent, females 50 per cent.

Every village had some form of home industry. Fifty-two per cent of the families in the hsien were engaged in some form of home industry. Fifty-seven per cent of the industrial output was produced by home industry. There were twenty times as many home industry families as there were industrial shops. There were ten times as many home workers as there were shop employees. Only 2.1 per cent of the population were shop workers.

Eighty-one per cent of the home workers were females, but only 4 per cent of the shop employees. Only one-quarter of one per cent of the females over 14 years of age were reported as shop workers. Two-

1. Shop is used for the non-family industrial workshop where production was the main activity. Store is used for the place where buying or selling, or both, was the primary business. See Chapter XIV.

2: Gamble S-5 (1926-1933) 1954 AF 12 North China AF 12

438 thirds of the male workers and 99.5 per cent of the female workers were engaged in home industry. The widespread hand spinning and weaving of the locally grown cotton accounted for the very large proportion of female workers. Over 60,000 were spinning, weaving, or both. Another 6,000 were engaged in other kinds of work. Eighty-eight per cent of the home industry workers were engaged in spinning, weaving, or both. About one-third of all females in the villages and some 8 per cent of the males were engaged in some form of home industry.

438 Because some families and workers were engaged in more than one industry there was unavoidable duplication in the home industry 472 figures for both families and workers. In determining the above figures we have made allowance, on the basis of the actual duplication in 1,220 128 home industry families (see Chapter IV), for the known but necessarily estimated duplication in our hsien totals. In the 1,220 families the duplication was 27.5 per cent for the families, 10.5 per cent for the female workers, but only 1.1 per cent for the male workers. Spinning and weaving covered all but 2 per cent of the workers' duplications. In our industry tables we have not attempted any adjustment in the totals as the duplication can only be estimated. It must, however, always be kept in mind when the family and worker totals are considered.

In some cases it was difficult to make a sharp distinction between home and shop industry. The payment or non-payment of wages to the workers has been the chief determining factor. Home industry generally did not involve paid workers though they might be hired occasionally during especially busy times. Home industry generally was carried on in winter or other leisure time, but might be year round. Shop industry was generally year round, but might be seasonal. Apprentices were employed in some of the shops. Cotton ginning, which in some instances was done in the homes, has been listed as a shop industry as most of the workers were paid on a piece rate basis. Weaving was classified as a home industry although a few weavers were paid according to their output.

435 The value of the industrial output in 1931 was estimated to be some $8,570,000. Fifty-seven per cent of this amount was produced 472 by home industry. Cotton products were 56 per cent of the total. The [288] village shops produced more than four times as much as the city shops 369 but the city output per shop was almost twice that of the villages. The 438 average annual output per worker was city shops $890, village shops

2: Gamble S-5 (1926-1933)1954 AF 12 North China AF 12

$400, and home industry workers $54. For the thread spinners production averaged only $13.80 per person per year.

The estimated profit of the shops totaled some $500,000. The gain from home industry was approximately $880,000. The profit per worker was city shops $260, village shops $36. The average gain for the home industry workers was only $10.70. For the thread spinners it was only $2.90. Without them the average was $15.45. The shop profit is figured after the payment of the workers' wages and other expenses, the home industry gain after the payment for raw materials, but before any wage allowance.

Table 92 shows the number of shops and workers and how the industrial work was divided between city and village shops and home industry. Because our production figures are based on estimates the tables give them only to the nearest $10.

Our industry figures are based on five studies:

(1) A survey of the primary and secondary occupations, farming, industrial, and professional, of all persons over 12 years of age in 515 families in the Experimental District. The results of this study are given in Chapter II.

(2) A detailed study of the 204 shops in the city and its three suburbs.

(3) A general study of home and shop industry in the 453 villages and towns.

(4) A house to house survey of the industrial activity of the 2,260 families living in six villages and a detailed study of 1,220 of the 1,740 families reporting some home industry. The findings of this study are reported in Chapter IV.

(5) A historical study of wages, prices, and other factors of cotton ginning and cloth weaving for various parts of the 52 years from 1882 through 1935.

The industrial information for the 515 families was secured as part of our detailed study of those families. The information on the shops in the city and the villages was secured, for the most part, by talking with the masters and workers of the shops. When definite information was unavailable, we endeavored to approximate it with help from neighboring shops or to make our own estimate. When there were only a few families in a particular type of home industry, we secured our figures from them. When large numbers of families were involved, as in spin-

2: Gamble S-5 (1926-1933) 1954 AF 12 North China AF 12

ning and weaving, we had to depend on the knowledge of the village elders or other representative persons to give us figures for the entire village. While our figures are, of necessity, based on the estimates of many different persons and there naturally were wide variations in the figures for the different villages, the proportion of families working, the average number of workers, the amount of output, and the totals and averages seem to give a reasonable approximation of the figures for the different types of industry and for the total industrial activity of the hsien.

Prices naturally varied from month to month and from market to market. With 83 different markets in the hsien there was opportunity for considerable divergence. The prices in our tables are based on figures from the main markets, secured at different times of the year. By averaging the quotations we have tried to show the general price level at the time of our industrial study, 1931.

In order to get at least a rough classification of the different industries we have divided them into seven groups: cotton ginning, spinning and weaving; weaving of non-cotton materials; food; wood and bamboo; metals; chemical goods and processes; miscellaneous. The second group, combining as it does the weaving of wool, hair, reeds, straw, and twigs, is a very heterogeneous group. Some of the other industries might have been otherwise classified but we have not attempted any rearrangement as it would not appreciably affect the principal items shown by the group figures, the generally low average output and gain per worker, the heavy concentration in cotton, and the very small proportion of metal work.

Fifty-six per cent of the total output and 61 per cent of the village shop and home industry output was in the cotton group. According to the tables, 89.7 per cent of the home industry families and 88.7 per cent of the home industry workers were working on cotton. These latter figures are higher than actual because of the large duplication in spinning and weaving, but even if allowance is made for this, on the basis of the duplication in the 1,220 home industry families, both figures are still over 86 per cent.

Almost three-quarters of the city shop output was either chemical goods or foods. It is indicative of general industrial activity in Ting Hsien that metal products were less than 2 per cent of the hsien output.

Only five of the 46 different city industries had reported outputs of

2: Gamble S-5 (1926-1933)1954 AF 12 North China AF 12

more than $50,000. Eye medicine, for which Ting Hsien is famous throughout China and southeast Asia, had the largest total, $303,000, produced by 18 shops. This was 40 per cent of the city production. The other four large industries were cotton ginning, cakes and condiments, flour milling, and shoes. The five industries together accounted for 78 per cent of the city's total output.

Four of the 31 village industries, cotton ginning, timber, flour milling, and brick making, had totals of more than $150,000. Only one, cotton ginning, was over $300,000. Its total was $1,811,840. The four industries included 83 per cent of the village industry total.

Five of the 88 home industries—cotton cloth weaving, cotton thread spinning, pig bristle sorting, reed mat weaving, and bean curd making—had totals over $150,000. Three—spinning, weaving, and bristle sorting—were over $500,000. Cotton cloth weaving was the only one over $1,000,000. Its total was $2,307,000. The five industries accounted for 85 per cent of the home industry total.

In the detailed tables we have given an estimate of the rate of profit or gain as a percentage of the value of output of each industry. These can only be rough averages, for the proportion naturally varied from shop to shop and family to family, but the figures show what those in each industry thought was the general rate for their business. The range was from 3 per cent for the home industry vermicelli makers to 52 per cent for the eye medicine makers and 68 per cent for those making the screens used in making paper. The vermicelli makers were able to continue with a low profit because the residue from their operations was good food for pigs.

Four of the city industries reported profits of more than 30 per cent and four less than 10 per cent. Eye medicine was the highest. Vermicelli making was the lowest, with 8 per cent.

Six village industries had average profits over 30 per cent, three were under 10 per cent. Cotton ginning was the lowest with 6 per cent, pewter the highest with 47 per cent.

Because no wages were involved in the home industry figures their gain or profit rates ordinarily were higher than those of the shops. Six of the 86 reported rates were 60 per cent or more, 27 were over 30 per cent, seven were less than 15 per cent, but only one, vermicelli making, was less than 10 per cent. It was 3.0 per cent.

The average gain per worker per year for the different home indus-

2: Gamble S-5 (1926-1933) 1954 AF 12 North China AF 12

tries ranged from $2.90 for the thread spinners to $427 for the wine makers. For eight industries the amount was over $100 but, except for bristle sorting, these were industries with few workers. Five of the eight industries had not more than 10 workers. For seven industries the amount was less than $5.00 per worker per year, for 14 it was less than $10.00. The seven industries with the lowest amount per worker included 46 per cent of the workers, the top eight industries only 0.6 per cent. The gain of each group was almost the same, 13.8 per cent of the total gain for the lowest group and 13.0 per cent for the top group. The industries with gains of not more than $10.00 per worker per year included 90.5 per cent of the workers, but only 59.3 per cent of the total gain.

Only seven of the 88 home industries—spinning, weaving, bean curd, vermicelli, noodle and soap making, and sesame oil pressing—were reported from all six districts of the hsien and could be said to be hsien wide. Sixty-one per cent were found in only one district.

Every village had at least one home industry, but none had more than eight. The average was 3.4. Spinning was the most widespread. It was reported by all but 16 of the 453 villages. Weaving was done in 378 villages. Bean curd was made in 249, vermicelli in 94, noodles in 77, and sesame oil in 51. These six industries were the only ones found in more than 10 per cent of the villages. Only five other industries were reported by 10 or more villages. Thirty-nine industries, 44 per cent, were reported by only one village; another 17 were found in only two villages.

Very little metal and woodworking was done as home industry. Together their output was only 2.1 per cent of the home industry total. All but one of the different types of metal work were reported by only one village. Only 26 families were doing metal work. Only one type of wood work, pitchfork making, was reported by more than three villages. It was carried on in seven villages. The output of the metal and wood working shops in the city and villages was some five times that of the home industry families. Itinerant blacksmiths and carpenters helped to meet the community need for metal and wood work. Not a few of the metal workers were Shansi men who came down to the coastal plain for work. They brought Shansi iron with them and added to it by accepting locally available scrap in part payment for their work.

Almost three-quarters, 72.5 per cent, of the 204 city shops were small businesses with less than five workers. Only one per cent had more than

2: Gamble S-5 (1926-1933)1954 AF 12 North China AF 12

14 workers. They were two large eye medicine shops, one with 25 workers, the other with 45.

The 824 workers in the city shops were divided:

	Number	*Per Cent*
Manager, accountants, clerks	119	14.4
Workmen	543	66.0
Apprentices	162	19.6
	824	100.0

The 162 apprentices were being trained in 117 of the shops, 58 per cent. The training period ordinarily was three years. In some cases it was three years plus a festival. In a few trades it was four or even five years. All the boys were given room and board. Some shops also provided their clothing. No regular wages were paid the apprentices but in most cases they were given presents of money at New Year's time. The amount was usually $5.00 or $10.00 depending on the time the boy had been with the shop. As so many of the shops had relatively few workers there were only 10 that had more than one or two apprentices. One large eye medicine shop reported 10. There was an average of one apprentice to 4.1 other employees and one apprentice to 3.4 other workmen.

The wages paid by some of the shops are shown in Table 94: daily from $0.45 to $1.00, monthly from $3.50 to $30, and yearly from $30 to $70—all plus board and tips.

The estimated value of the goods produced by the city shops totaled some $731,000. This was an average of just under $300 per shop per month. For one-third of the shops the amount was less than $85 per month. Only one-fifth of the shops produced as much as $250 per month.

The estimated profit of the city shops was some $216,000, almost 30 per cent of the value of the output. The high rate of profit of the eye medicine shops, 52 per cent, and their large proportion of the output, 42 per cent, were largely accountable for this high average. Only 10 industries reported a rate of more than 20 per cent and only five more than 25 per cent. Only 20 per cent of the shops were in the "more than 20 per cent" group.

Profits were less than $200 a year for 53 per cent of the shops. Only 14 per cent made as much as $50 a month. Three shops, evidently eye medicine shops, were in the $10,000 a year and over group.

The best reports and estimates we could get on the amount of capital invested in the city shops gave the total as $77,160, an average of only

2: Gamble S-5 (1926-1933) 1954 AF 12 North China AF 12

435 438 472 $380 per shop. The individual amounts ranged from $30 to $5,500. For 52 per cent of the shops the amount was less than $300. For 81 per cent it was less than $500. The average investment per worker was only $95.

The relatively small amounts of capital shown may be partly due to under-reporting, as the shop keepers naturally were hesitant about giving complete answers to our questions. At the same time it must be remembered that a very large proportion of the shops were in rented quarters. (Eighty-two per cent of the stores in the city rented their buildings and the figure for the shops was probably about the same.) Almost no machinery was used; most of the equipment was inexpensive hand tools; only a small labor investment was required as wages were low and most of the manufacturing processes were simple and short; inventories of finished goods usually were not large. The reported value of the goods produced represented a capital turnover of 9.5 times. The estimated profit was 2.8 times the total capital. Any under-reporting of capital would make these figures larger than actual. It should also be noted that 72 per cent of the total profit was earned by the eye medicine stores, whose estimated profit rate was 52 per cent of their output.

Profit figures for the individual village shops, if available, would undoubtedly be smaller than for the city. The average shop output was only 52 per cent of the city average. The average output per worker was $100, less than half the city average. The total estimated profit for the 1,578 shops was only one-third larger than the total for the 204 city shops. Cotton ginning with a 6 per cent profit was the largest item rather than eye medicine making. The average rate was only 9.1 per cent. For the city shops it was 29.6 per cent.

If the rate of capital turnover was the same in the villages as in the city the average capital for the village shops was $180 and the profit 100 per cent per year.

If, after making allowance for possible under-reporting of capital, the profit rates still seem unduly high, it must be remembered that interest rates on secured personal loans averaged some 21 per cent per year in 1931 and many of the stores paid 18 and 24 per cent per year for money left on deposit with them.

Cotton Ginning and Batting

288 Cotton was the fifth Ting Hsien crop in value, $1,770,000. It was the largest money crop, as the other large crops, grains and sweet potatoes,

2: Gamble S-5 (1926-1933)1954 AF12 North China AF12

TABLE 93. TYPES OF INDUSTRY: SHOPS, FAMILIES, WORKERS, OUTPUT

	Number	Workers	Output	Output Per Worker	Per Cent of Total
Cotton Ginning, Spinning, and Weaving					
City shops	23	72	$ 76,380	$1,060	
Village shops	316	1,244	1,811,840	1,440	
Village families	42,518	80,212	2,948,960	40	
Total or average	42,857	81,528	4,837,180	60	56.4
Weaving Hair, Reeds, Straw, Twigs, and Wool					
City shops	1	7	2,590	370	
Village shops	–	–	–	–	
Village families	2,608	4,580	484,640	110	
Total or average	2,609	4,587	487,230	110	5.7
Food					
City shops	74	259	203,760	780	
Village shops	361	998	401,440	400	
Village families	1,353	3,441	425,420	120	
Total or average	1,788	4,698	1,030,620	220	12.0
Wood and Bamboo					
City shops	21	74	28,760	390	
Village shops	713	3,547	371,440	100	
Village families	336	642	77,900	120	
Total or average	1,070	4,263	478,100	110	5.6
Metal					
City shops	20	46	11,700	250	
Village shops	56	322	126,880	390	
Village families	26	51	26,770	520	
Total or average	102	419	165,350	400	1.9
Chemical					
City shops	40	245	341,110	1,390	
Village shops	116	1,334	239,200	180	
Village families	173	594	58,810	100	
Total or average	329	2,173	639,120	290	7.5
Miscellaneous					
City shops	25	121	66,610	550	
Village shops	16	51	24,680	500	
Village families	386	909	843,000	930	
Total or average	427	1,081	934,290	860	10.9

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[p. 313]

STORES

In view of the inequality of capital stock we find 443
the average figure of $1,070 worthless as an indication of typical capital for all stores. If we divide the stores into two typeslarge and small, taking $1,000 as the dividing line, we find the two averages of $3,224.3 for the larger stores, and only $132.3 for the small stores.

In the collection of data concerning capital stock we had great difficulty in obtaining accurage figures, as some of the stores refused to answer our questions, and therefore, certain figures are estimates made by observation of the business, and from conversations with the owners; but although the reader is warned against using the figures given as accurate data, yet the general information which they convey is useful for our guidance and further study.

7. Ownership and Value of Store Premises.

From the following table we can see that 77% of 443
the stores are rented, and only 21.3% owned by the 472 ●
occupiers, and in two cases the stores are half owned 427
and half rented.

TABLE XXVIII. OWNERSHIP OF STORE PREMISES.

OWNERSHIP	No.	%
Owner operator	26	21.3
Rented	94	77.0
Half owned	2	1.7
Total	122	100.0

CHING-HO: A SOCIALOGICAL ANALYSIS

443 There is a wide range in the value of stores from
●472 the hut worth a few dollars to the well-built store of
427 $15,000, although the value of the majority is between $100 abd $2,000. Table XXIX gives the values and shows that 91 stores or 74.6% have premises valued between $200 and $1,999. The average value of all premises is difficult to calculate, and values are given

TABLE XXIX VALUE OF STORE PREMISES.

VALUE CLASSES. MEX. $.	NO. OF STORES.	TOTAL VALUE.
0-9	1	5
10-49	3	76
50-99	7	525
100-199	21	2,625
200-299	17	3,825
300-399	11	3,575
400-499	12	4,900
500-999	16	10,000
1000-1999	14	17,500
2000-2999	4	9,000
3000-3999	5	17,500
5000 and over	3	36,000
Total	114	105,530
Unknown	8	

in round numbers in most cases, and with the exception of the first three classes, and the last, the first quartile is used in the calculation to represent the whole class. The last average is the approximate average between the three figures 10,000, 10,000 and 15,000. From the assumptions stated above we can get the average value of all premises in Ching Ho which must of course, have a very large probable error. The average is calculated to be $925.7.

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8. Organisation and Management.

91.8% are run under the simple style of a single owner proprietorship; two stores are under the joint control of brothers; and only eight stores, or 6.9% are carried on by partners. Not a single store is organised under the modern method of incorporation, and the lack of this from may be due to the small amount of capital required in the businesses, which can easily be raised by the proprietor himself or with the help of one or two partners.

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443

TABLE XXX. ORGANISATION OF STORES.

TYPES OF ORGANISATION.	STORES	
	NO.	%
Proprietorship	112	91.8
Borthers	2	1.6
Parnership	8	6.6
2 partners	5	
3 „	2	
5 „	1	
Total	122	100.0

CHING HO: A SOCIALOGICAL ANALYSIS

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443 108 stores or 88.5% are managed by the proprietors or their partners, and only 14 stores or 11.5% are able to afford to employ managers to look after the business, and all these stores have a capital of over $1,000. Among these 14 stores six also employ an assistant manager. Not all the big stores are included in these 14, and there are still 13 stores having a capital of $1,000 or more which are managed by the owners themselves, but 7 of these employ an assistant manager who is the real business head.

9. Positions of Store Population.

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463 In this section we shall only include males above the age of 16 years as there is only one woman in business who keeps a small inn. In addition to the 496 males above the age of 16 years there are also included 42 apprentices younger than 16 years, bringing the total number of male employees to 538. The positions which absorb most poeple are those of clerk, apprentice and manager, which employ in all 406 persons or 75. 5% of all the store workers. On the average each store has one clerk, one apprentice, and one manager, although the fact of there being 127 managers to 122 stores needs explanation. This is owing to the fact that in certain partnerships all the partners are active in the business, and it is not possible to distinguish and call one manager and the other assistant. In addition to the ordinary clerks there are 25 accountants and 23 outside workers who carry on special duties in making negotions and studying market conditions. In the ordinary shops the division is not so distinct, and the clerks are